

**Work Order ID 62970**

Thursday, October 14, 2010 12:41:31 PM



Page 1

Item ID:	D3391-011	Accept		Setup	Start		
Revision ID:						Stop	
Item Name:	Fwd Tube Assembly						
Start Date:	10/14/2010	Start Qty:	1.00		Cust Item ID:		
Required Date:	10/22/2010	Req'd Qty:	1.00		Customer:		
Reference:							
Approvals:	Process Plan:	Date: <i>10-10-14</i>	Tooling:	Date:	Run	Start	
	QC:	Date: _____	SPC (Y/N):	Date: _____	Stop		

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3391	Rev H								
100	Skidtubes	0.00	<i>DP</i>						
	Memo	0.00							
	Cut extrusion to 46.52 +0.010 -0.020								
110	BENDING MACHINE - SKIDTUBES	0.00	<i>DP</i>						
CNC Bend 1	Memo	0.00							
CNC Delta 100 Bender	Bend as per Dwg D3391								
120	QC5- Inspect part completeness to step on W/O	0.00	<i>DP</i>						
QC	Memo	0.00							
Quality Control									

*10-10-20**10-10-20**J 10-10-22*

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action      Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Item ID: D3391-011

Accept



Setup Start



Revision ID:

Item Name: Fwd Tube Assembly

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Start Date: 10/14/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 10/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center ID

130

Operation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

0.00

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine as per Folio FA590 Rev. \_\_\_\_ & Dwg D3391 Rev. \_\_\_\_  
Identify as D3391-1

SA

10/11/15

16

140



QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Quality Control

Memo

0.00

SA 10/11/15

10

150



CONVENTIONAL MILLING MACHINE

0.00

Mill Conv

Conventional Milling Machine

Memo

0.00

1-Drill .1875" at end of tube as per Dwg D3391

10/11/17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



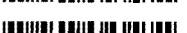
QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Quality Control

  
 10/11/17

170

QC8- Inspect parts - second check

0.00



QC

Quality Control

  
 SL 10/11/22

0.00

W/O:		WORK ORDER CHANGES					
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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



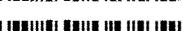
QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180



Skidtubes

0.00

Skidtubes

Skidtubes

Memo

0.00

1-Drill and c'sink float bag holes as per Dwg D3391 using DT8798(Do not open tow cap holes to finish size)  
(DRILL ALL HOLES)

2-Drill Remaining two holes for tow cap using DT 8819 Locating off of .1875"  
holes drilled in previous step

3-Open tow cap holes to .208" as per Dwg D3391

4-Open Tow Ring hole to .640" as per Dwg D3391

5- open float bag holes 0.328" and counter sink as per dwg D3391

6-Deburr and scribe batch # inside aft end

7- transfer drill D3391-011 with D3391-013

190



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00



W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center ID

200

Operation  
Description

Chemical Conversion Coat per QSI005 4.1

Set Up/  
Run Hours

0.00

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

HandFinish

Memo

0.00

Hand Finishing

210



QC3- Inspect Part Finish

0.00

QC

Quality Control

Memo

0.00

220



Skidtubes

0.00

Skidtubes

Memo

0.00

Skidtubes

1-Install crossbolt spacers per dwg D3391

A/R Magnabond 6398 batch: M115580

Exp - 07 - 2011

2- Grind flush

3- back drill crossbolt if necessary



10-12-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Cust Item ID:

Required Date: 10/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
Description

230



QC

Quality Control

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

0.00

8/12/13

(X)

235



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

=) 10/12/13

10

0.00

Memo

AND REALODINE AS PER PAR09-043

240



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Memo

3:40  
START TIME: 320°  
OVEN TEMPERATURE:  
FINISH TIME: 4:10

(X) J M 14/05/09

M116964

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Item ID: D3391-011

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Revision ID:

Item Name: Fwd Tube Assembly

Stop



Start Date: 10/14/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 10/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
Description

250



QC3- Inspect Part Finish

QC

Quality Control

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

0.00

0.00

1 4 H 10/05/10

255



Skidtubes

Skidtubes

Skidtubes

0.00

0.00

1 4 H 10/05/10

Memo  
\*\*\*\* install D3591-1 spacer as per DSI9364 and wearplate and gasket as per  
DWG \*\*\*\*

257



QC

QC5- Inspect part completeness to step on W/O

0.00

0.00

Swartz

(4)

Quality Control

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**Work Order ID 62970**

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Thursday, October 14, 2010 12:41:31 PM

Item ID: D3391-011

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Setup Start



Revision ID:

Item Name: Fwd Tube Assembly

Stop



Start Date: 10/14/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 10/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

260

Operation  
DescriptionIdentify as per dwg & Stock Location: w10Set Up/  
Run Hours

0.00

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

D412-742-041/B62963

X1

Ø

11/05/10

Packaging

Memo

0.00

Packaging

280



QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

MF

11-05-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Thursday, October 14, 2010 12:41:35 PM

Page 1  
3

Work Order ID: 62970



Parent Item: D3391-011



Parent Item Name: Fwd Tube Assembly

Start Date: 10/14/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

**Comments:**

IPP A 05.09.13 New issue KJ/JLM  
 IPP B 06.02.09 Dwg rev.D EC  
 IPP C 07.03.13 revF dwg ec  
 IPP D 07.11.01 ecn1053P EC  
 IPP Rev:E ECN 1056 07-11-12 DD verified by:EC  
 IPP Rev:F 08-09-08 new process (ecn 08-510) DD verified by:EC  
 IPP Rev:G 08-09-10 revH as per dwg DD verified by:EC IPP Rev:H  
 10.04.07 add part in bom DD verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6013-047 		Manufactured	No			100	Each	36.0000	1	1			

Skidtube Material

Location	Loc Qty	Loc Code
LG	36	
23935	3	
26547	33	

D3401-041 	Manufactured	No	255	Each	13.0000	1	1		DP 10-10-20 M110510
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Tow Cap Assembly

Location	Loc Qty	Loc Code
FP	13	
46029	12	
50316	1	

D3564-13 	Manufactured	No	255	Each	31.0000	1	1		X1 M110510
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Wearshoe

Location	Loc Qty	Loc Code
FP17	31	B66136
59660	1	
60862	8	
61828	10	
62229	12	

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Work Order ID: 62970



Parent Item: D3391-011



Parent Item Name: Fwd Tube Assembly

Start Date: 10/14/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3566-13



Manufactured No

255

Each

31.0000

1

1



HL ulos10

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP012	31	B66550
60209	6	
61996	25	

D3670-4-200



Manufactured No

220

Each

64.0000

9

9



SPACER

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	64	
57349	64	

D3672-1



Manufactured No

57349

255

Each

855.0000

4



Phenolic Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST077	855	
42329	150	
52505	705	

⑨ 4 DP 10-12-6  
HL ulos10

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Parent Item: D3391-011



Parent Item Name: Fwd Tube Assembly

Start Date: 10/14/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN3C4A



Purchased

No

255

Each

1,361.000

10

10



(x10) M1 uLos10

BOLT

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST303	115438	3	M1117813
	114108	3	
ST350	114416	14	
	114523	12	
R	115300	2	
	115589	330	
AN960C10L	114108	1000	

AN960C10L

NAS1149C0332

Purchased

No

255

Each

29.0000

10

10



(x10) M1 uLos10

washer

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST245	107534	29	
	1117291	29	
AEELS-1032-130	1117331	0.0000	
		2	

AEELS-1032-130



Purchased

No

255

Each

0.0000

2

(x2) M1 uLos10

INSERT

AEELS-1032-225



Purchased

No

255

Each

0.0000

10

(x10) M1 uLos10

INSERT

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	62970
Description: Float Skidtube (412)	Part Number:	D3391-1
Inspection Dwg: D3391 Rev: H		Page 1 of 1

# **FIRST ARTICLE INSPECTION CHECKLIST**

**X** First Article       Prototype

Measured by:	<u>SD</u>	Audited by:	<u>JL</u>	Prototype Approval:	N/A
Date:	<u>10/11/15</u>	Date:	<u>10/11/15</u>	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.04.27	New Issue P/O D3391-011/-021	KJJ/LM	
B	06.06.19	Tolerances revised per D3391 Rev. E	KJJ/LM	
C	07.03.21	Dimensions removed per Dwg rev. F	KJJ/LM	
D	07.11.23	Dwg Rev. updated	KJJ/EC/DD	
E	09.12.14	Dwg Rev updated	KJ	BB MM

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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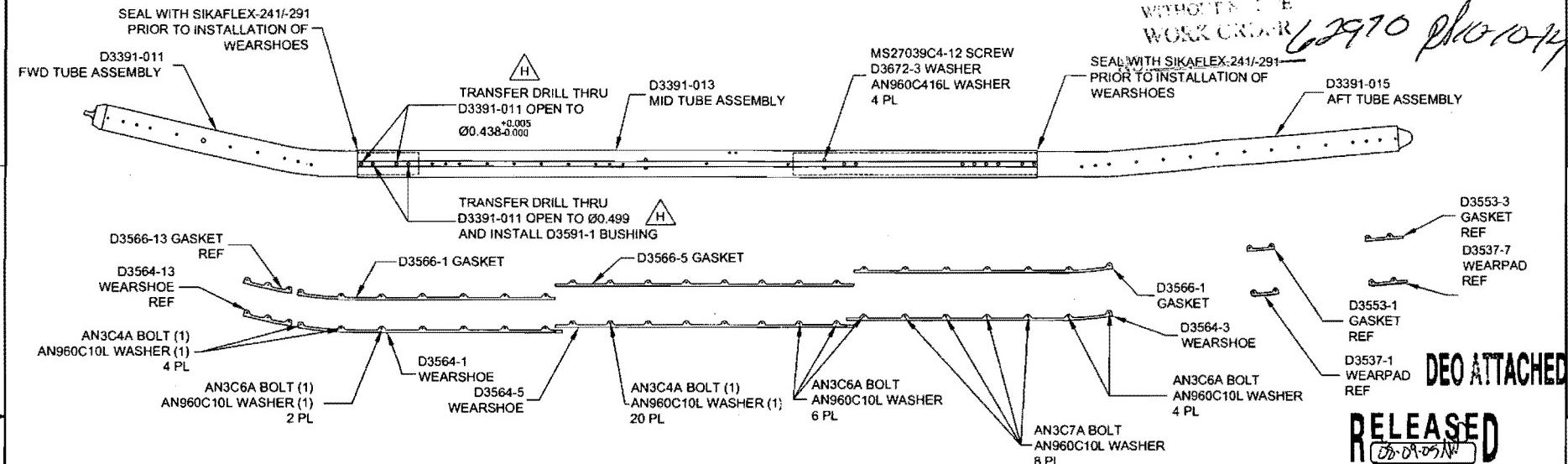
NOTE: Date & initial all entries

SHOP COPY

RETURN TO 2

ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK CRAFT

*62970 ph.10/14/04*



## D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-2	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
2	D3566-5	GASKET
24	AN3C4A	BOLT
12	AN3C6A	BOLT
2	AN960C10L	WASHER
44	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

## GENERAL NOTES

- FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. CBORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DS1 938 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS. DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

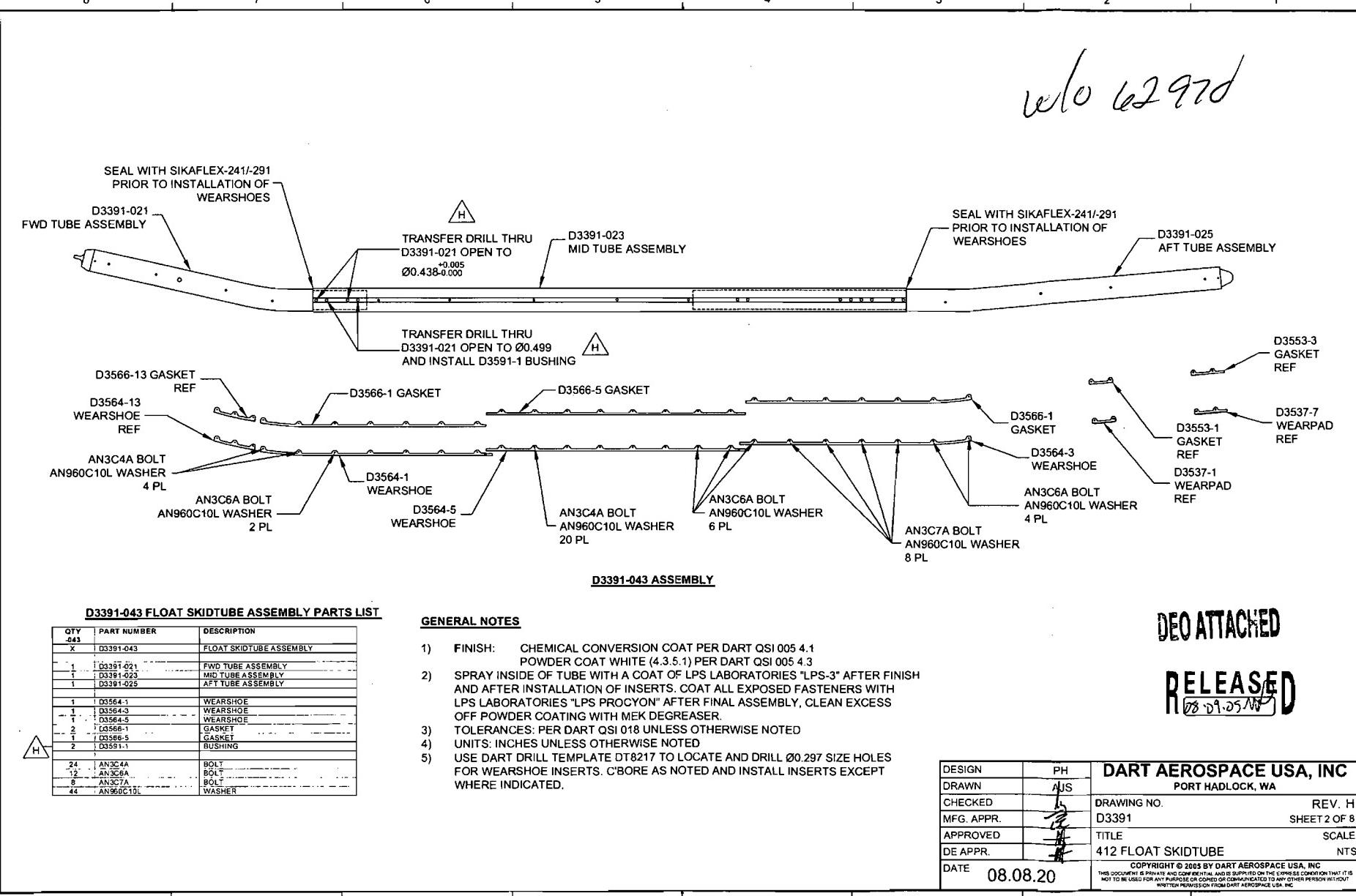
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



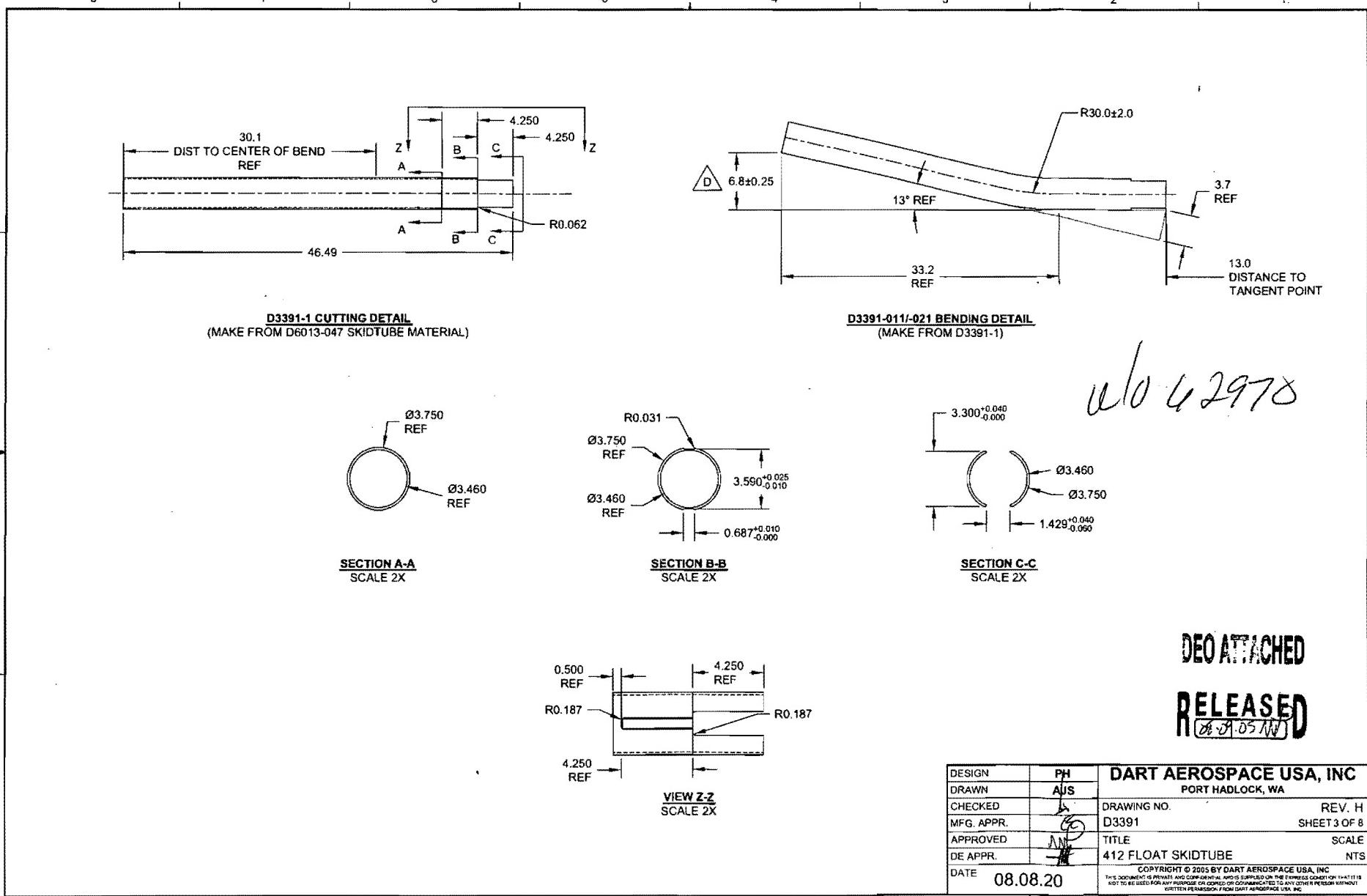
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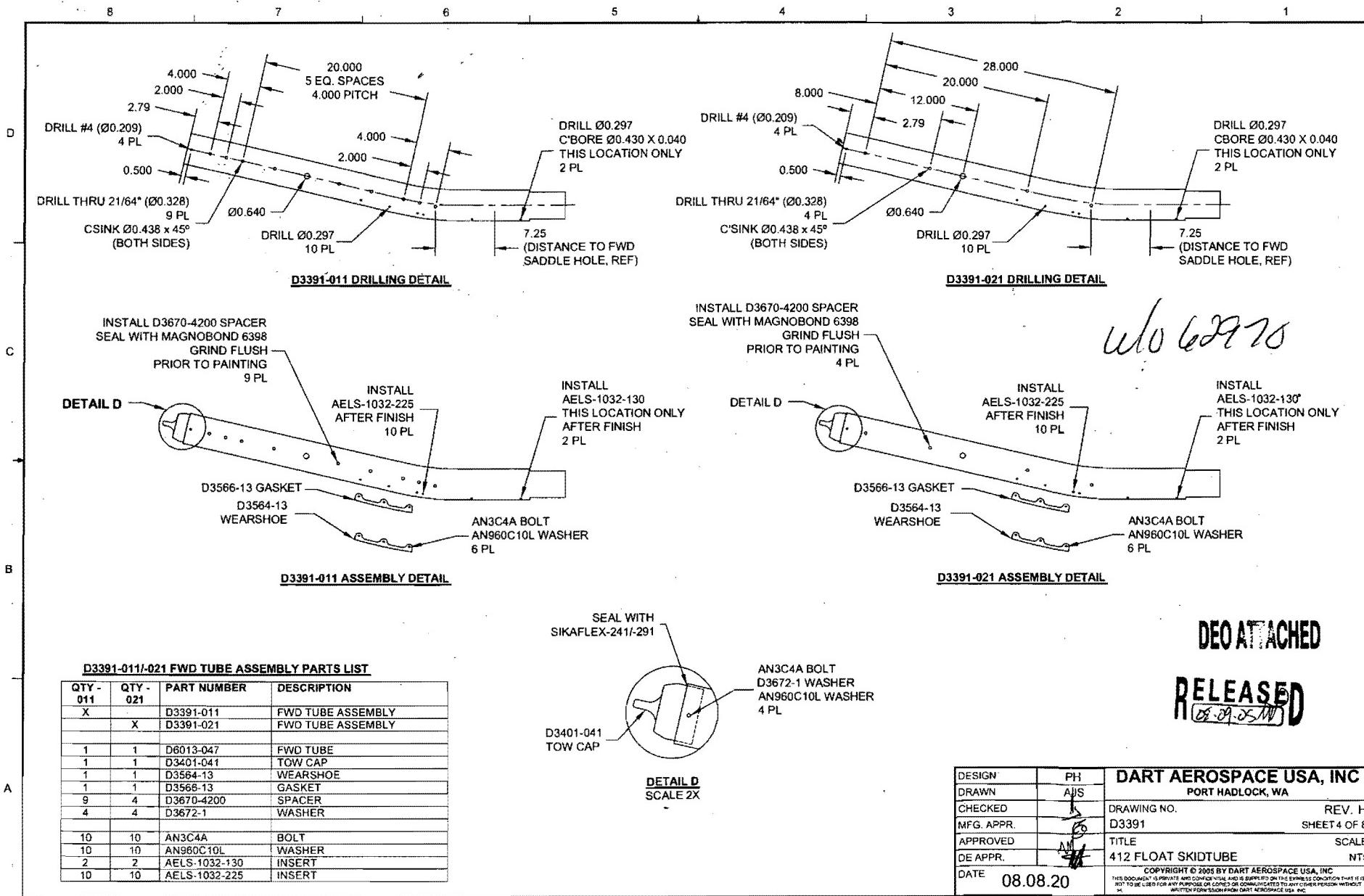
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



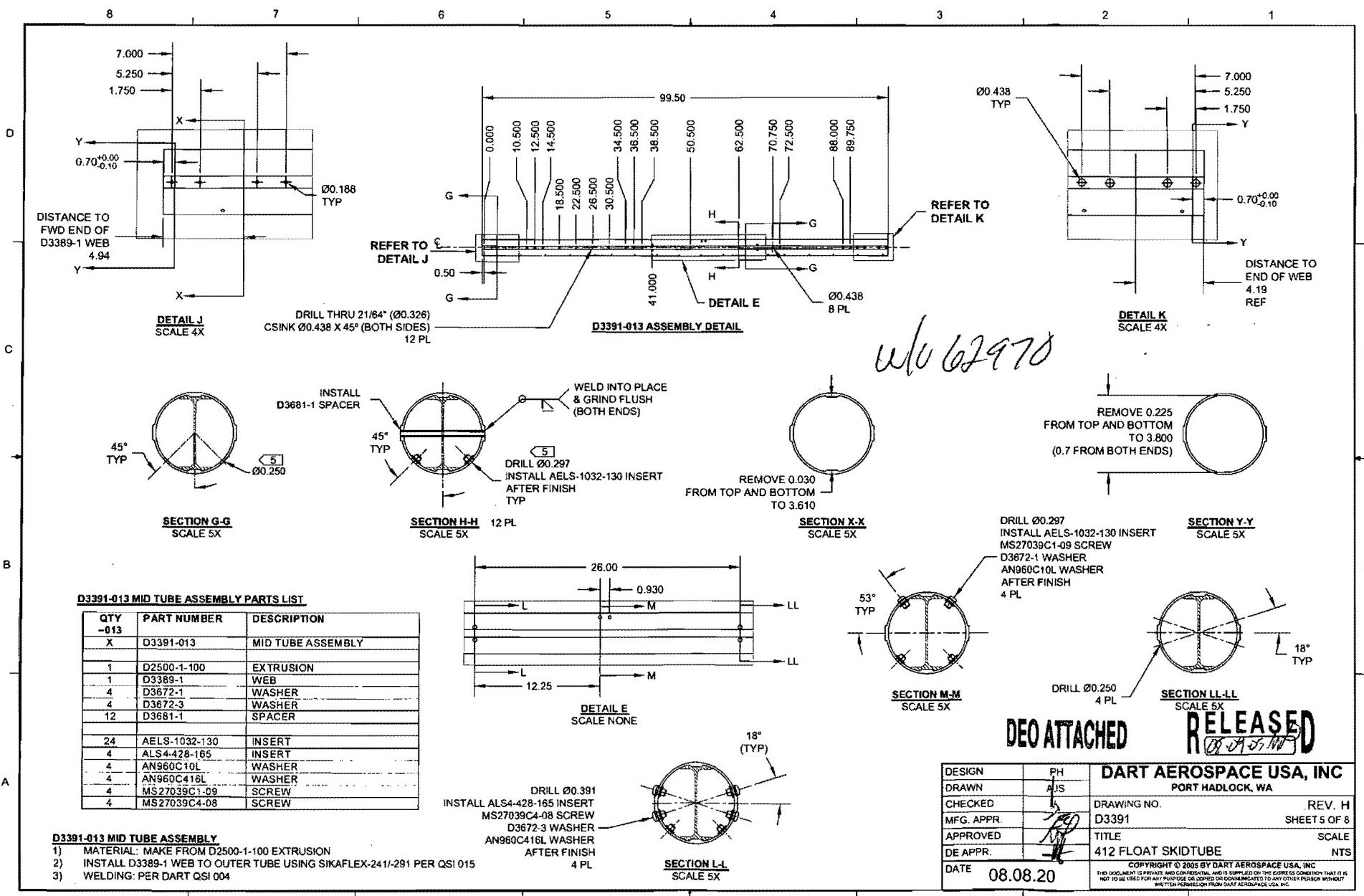
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



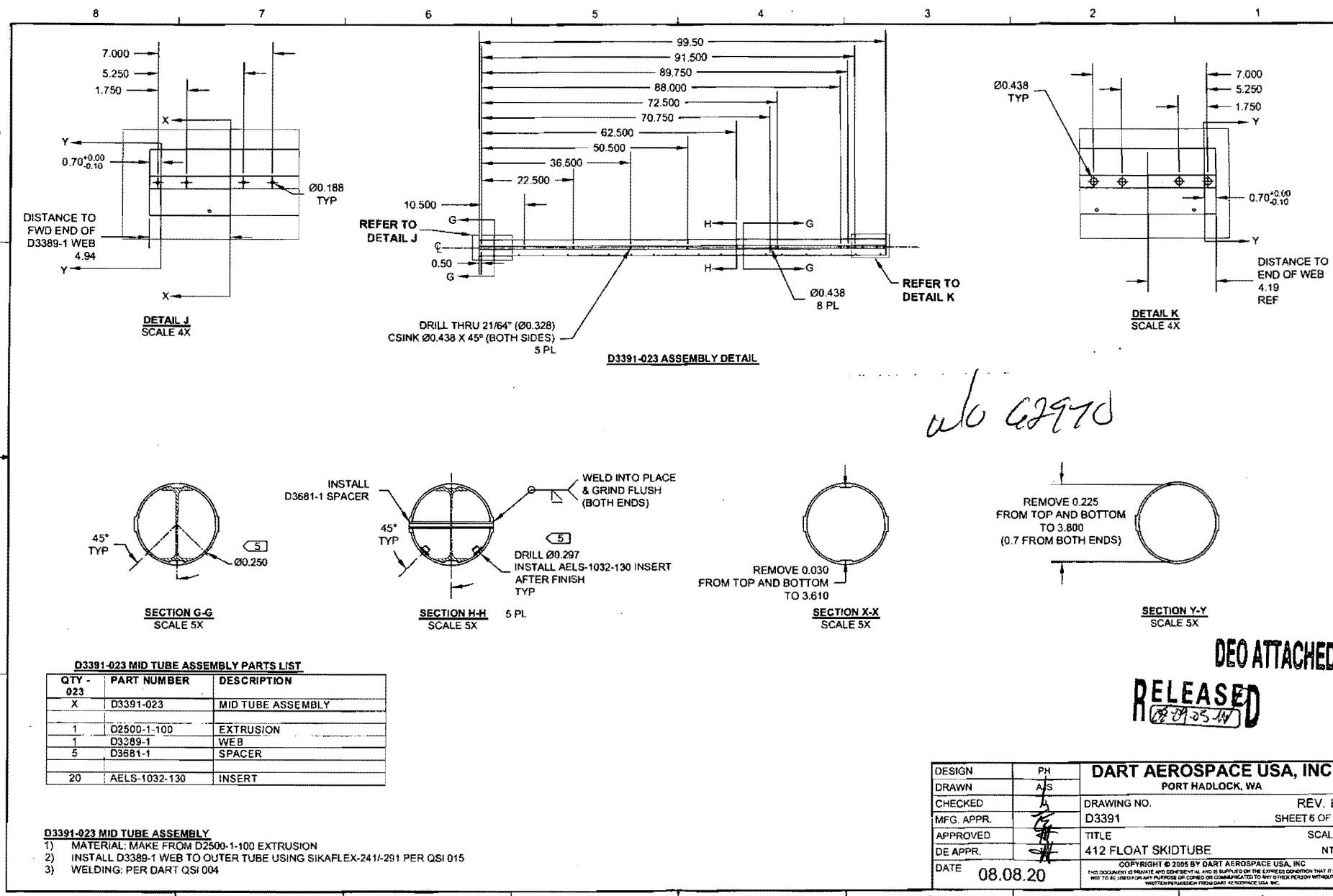
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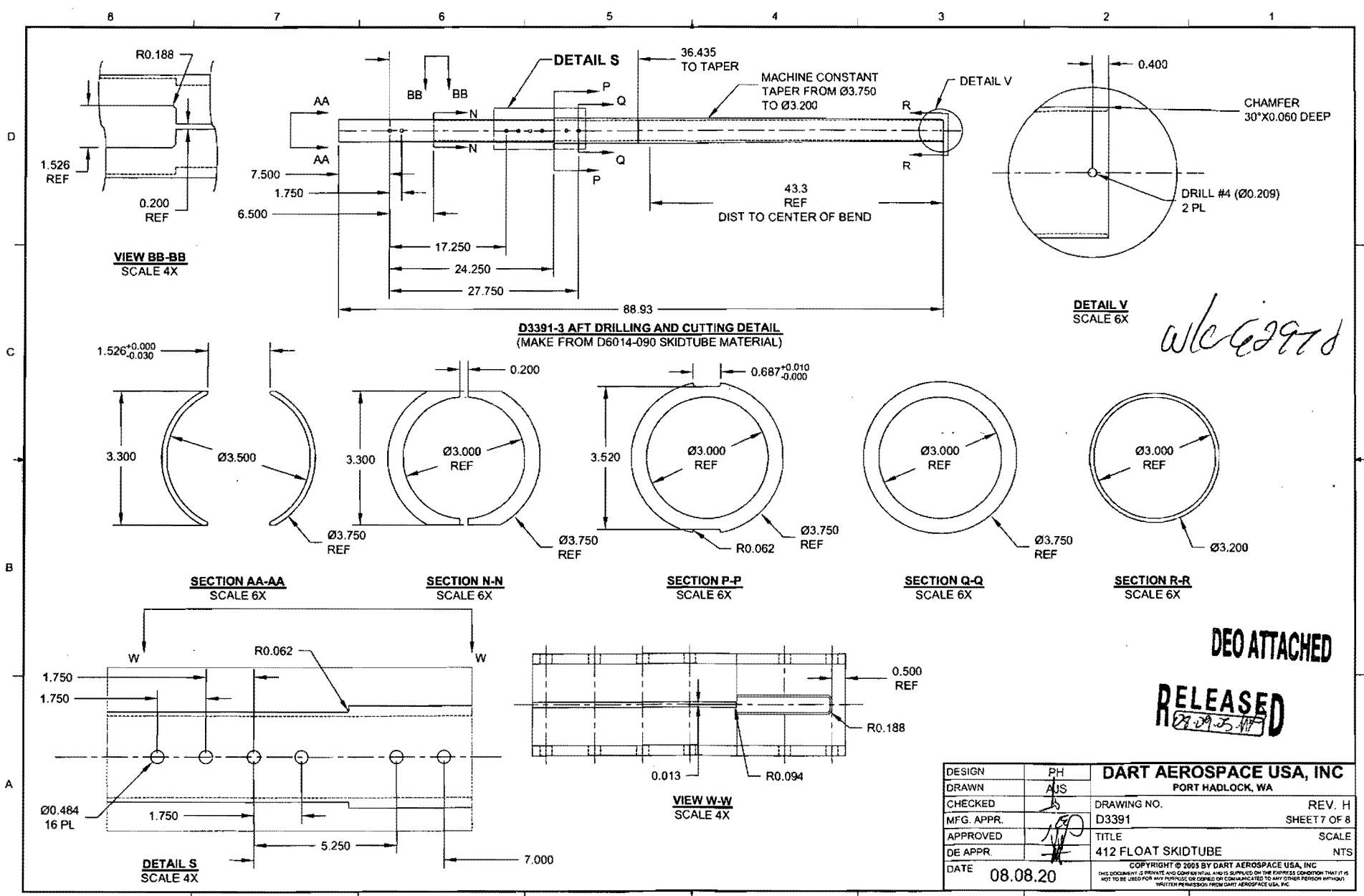
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



62978

DEO ATTACHED

DESIGN	PH	DART AEROSPACE USA, INC		
DRAWN	AJS	PORT HADLOCK, WA		
CHECKED	<i>AS</i>	DRAWING NO.	REV. H	
MFG. APPR.	<i>100</i>	D3391	SHEET 7 OF 8	
APPROVED	<i>AS</i>	TITLE	SCALE	
DE APPR.	<i>AS</i>	412 FLOAT SKIDTUBE	NTS	
DATE	08.08.20			

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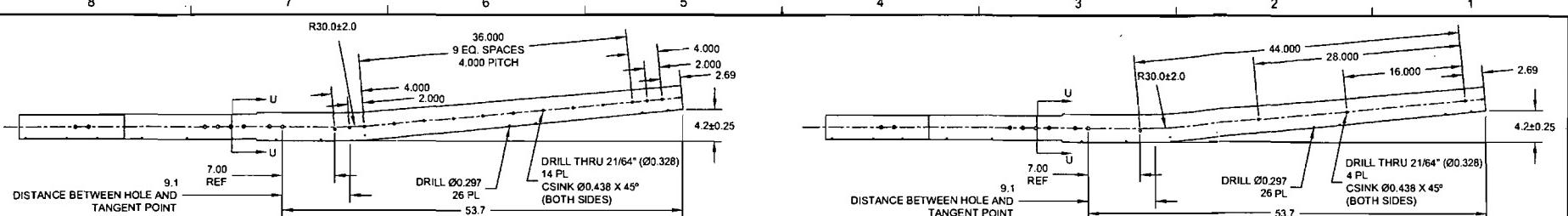
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DATE	STEP	Description of NC Section A	Corrective Action      Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3391-015 BENDING AND DRILLING DETAIL  
(SEE CBORE DETAIL BELOW)

INSTALL D3670-4200 SPACER  
SEAL WITH MAGNOBOND 6398  
GRIND FLUSH  
PRIOR TO PAINTING

14 PL

D3391-015 ASSEMBLY AND CBORE DETAIL  
(SEE TABLE)

AN3C5A BOLT  
AN960C10L WASHER  
4 PL

D3553-1 GASKET  
CB2 (NO CBORE)  
C3537-1 WEARPAD  
AN3C4A BOLT  
AN960C10L WASHER  
4 PL

D3553-3 GASKET  
CB4 (NO CBORE)  
AN3C5A BOLT  
AN960C10L WASHER  
4 PL

D3391-025 BENDING AND DRILLING DETAIL  
(SEE CBORE DETAIL BELOW)

INSTALL D3670-4200 SPACER  
SEAL WITH MAGNOBOND 6398  
GRIND FLUSH  
PRIOR TO PAINTING

4 PL

D3553-1 GASKET  
CB2 (NO CBORE)  
C3537-1 WEARPAD  
AN3C5A BOLT  
AN960C10L WASHER  
4 PL

AN3C5A BOLT  
AN960C10L WASHER  
4 PL

D3553-3 GASKET  
CB4 (NO CBORE)  
C3537-7 WEARPAD  
AN3C4A BOLT  
AN960C10L WASHER  
4 PL

D3391-025 ASSEMBLY AND CBORE DETAIL  
(SEE TABLE)

SEAL WITH  
SIKAFLEX-241/-291  
D2646 AFT CAP  
AN3C4A BOLT  
D3672-1 WASHER  
AN960C10L WASHER  
2 PL

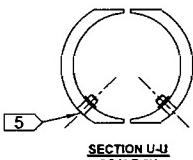
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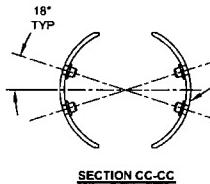
QTY	QTY	PART NUMBER	DESCRIPTION
015	025	D3391-015	AFT TUBE ASSEMBLY
X	X	D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
14	4	D3670-4200	SPACER
2	2	D3672-1	WASHER
14	14	AELS-1032-130	INSERT
12	12	AELS-1032-225	INSERT
4	4	ALS4-428-165	INSERT
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
10	10	AN960C10L	WASHER

CBORE HOLES MARKED CB1-CB4 AS FOLLOWS AND  
INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

HOLES MARKED	QTY D3391-015	QTY D3391-025	CBORE	P/N
CB1	12	12	Ø0.430 X 0.170	AELS-1032-225
CB2	4	4	Ø0.430 X 0.170	AELS-1032-130
CB3	6	6	Ø0.430 X 0.040	AELS-1032-130
CB4	4	4	NONE	AELS-1032-130



SECTION U-U  
SCALE 3X



SECTION CC-CC  
SCALE 3X

DRILL Ø0.391  
CBORE Ø0.516 X 0.040 DEEP  
INSTALL ALS4-428-165 INSERT  
4 PL

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AIs	PORT HADLOCK, WA	
CHECKED	SJ	DRAWING NO.	REV. H
MFG. APPR.	E	D3391	SHEET 8 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE 08.08.20		COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED UNDER THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS PROVIDED, OR COPIED, EXCEPT WITH WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	<b>DART AEROSPACE USA, INC</b> <b>ENGINEERING ORDER</b>	D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>cp</i>	CHECKED <i>AA</i>	MFG. APPR. <i>AA</i>	APPROVED <i>MD</i>	DE APPR. <i>AA</i>		
DATE 09.09.23	DATE 09.09.24	DATE 09/09/25	DATE 09/09/30	DATE 09/09/30	DATE 09/09/30	

**PURPOSE:**

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

**CHANGE:**

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.~~ COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

**RELEASED**  
2010-02-02

*AP*

*u66297d*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries